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S P E C I F I C A T I O N

OF

AUGUSTUS FREDERICK THOELDEN.

APPARATUS FOR SUPPORTING THE
HUMAN BODY.

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Apparatus for Supporting the Human Body.

THOELDEN'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, AUGUSTUS FREDERICK THOELDEN, of Saint Albans Street, Pall Mall, in the County of Middlesex, Esquire, send greeting.

WHEREAS His most Excellent Majesty King George the Third did, by
5 His Letters Patent, bearing date at Westminster, the Thirtieth day of October, in the forty-third year of His reign, give and grant unto me, the said Augustus Frederick Thoelden, His especial licence that I, the said Augustus Frederick Thoelden, during the term of years therein mentioned, should and lawfully might make, use, exercise, and vend, within England, Wales, and
10 the Town of Berwick-upon-Tweed, my Invention of "CERTAIN MECHANICAL APPARATUS FOR SUPPORTING THE HUMAN BODY, OR ANY PART THEREOF, MORE ESPECIALLY DURING THE TIME OF REPOSE, AND FOR OTHER BENEFICIAL PURPOSES;" in which said Letters Patent there is contained a proviso obliging me, the said Augustus Frederick Thoelden, by an instrument in writing under my hand
15 and seal, to cause a particular description of the nature of my said Invention, and in what manner the same is to be performed, to be inrolled in His Majesty's High Court of Chancery within one calendar month after the date of the said recited Letters Patent, as in and by the same, relation being thereunto had, may more fully and at large appear.

20 NOW KNOW YE, that in compliance with the said proviso, I, the said Augustus Frederick Thoelden, do hereby declare that my said Invention is described in manner following (that is to say) :—

Thoelden's Apparatus for Supporting the Human Body.

In general terms, I support or suspend from the cieling or upper part of the apartment, or from the usual framing or tester of a common bedstead, or from a frame expressly made and constituted for this purpose, a receptacle in which the human body, or any part thereof, may be placed and supported, which said receptacle, herein-after more particularly to be directed, I denominate the bed ; 5 and in order that the said bed may not only possess the advantage of being moved, placed, or swung in all directions, after the manner of a pendulum, with regard to its center or centers of suspension, but likewise in order that the said bed may be capable of a pleasant, easy, and salubrious motion upwards and downwards, or by approaching nearer to or receding further from 10 the said center or centers of suspension, in a kind of oscillatory or librating motion, I interpose between the center or centers of suspension, and the said apparatus called the bed, a spring, of any convenient figure, or a number of springs, such as the nature and purposes of the construction may require. This, for example, in case I adopt the use of a spring in the form of a bow 15 (which is as good as any) I fix one of the moveable extremes, namely either the crown of the bow or the middle point of its string, to the upper hook or place of suspension, and I suspend the bed itself to the other moveable extremity, namely, the middle point of the string or the crown of the bow, as the case may be ; and in order that the person who shall be either wholly or 20 in part supported within the said bed may produce at pleasure the before-described alternate motion towards or from the said center or centers of suspension, I fix a pulley at or near the said center, through which a cord is passed, having one end thereof attached to the bed itself, and the other at liberty to be drawn by the said person or an assistant, to produce the motion aforesaid. 25 And in the said last-mentioned construction, as well as every other part of my said apparatus in which cords and pullies are or may be used, I apply compound tackles of the usual forms whenever the same are found to be convenient or necessary ; and in all cases, and whatever may be the form of the said spring or springs, I prevent the extreme of motion, and render it im- 30 possible for the spring to fail or give way, by attaching a rope, or a wire, or a metallic rod, or other fit piece, to the bed itself, and also to the center of suspension, so that the said rope, or wire, or rod shall be fully extended and brought into action, and well and safely support the said bed, whensoever the distance of the same from the center of suspension shall be as 35 great as the operator shall judge to be fit and proper.

The bed for supporting the entire human body or person may consist of the usual square frame, with legs, for the purpose of standing in an apartment as usual, or it may be made of any other figure, with posts, curtains, and other

Thoelden's Apparatus for Supporting the Human Body.

useful and ornamental parts, to which I have no claim to exclusive privilege, excepting so far as the same may compose parts of this my said mechanical apparatus; and the side motions of the said bed may be regulated, governed, or confined by such framing or cords, or other geer affixed to the apartment, or to the frame of the bed, or to both, as may be thought fit. I propose, as one of the most
5 simple, cheap, and useful constructions, that four cords should severally proceed from the corners of the bedstead to the lower part of the spring suspension aforesaid, and that the bedstead should be adjustable at any required height by pullies, loops, cog wheels, or other contrivances for lengthening or shortening
10 or shortening the effective part of the said cords; and I do place and construct within the said square frame two other pieces of framing, one of which is capable of rising up by hinges, so as to raise a suitable part of the bedding together with the patient, and to constitute a support, performing the office of the back of an easy chair, and the other of the said pieces of framing is capable of being
15 lowered down or depressed by hinges, so as to permit a suitable part of the bedding to be depressed, and suffer the legs of the patient or person supported within the said bed to acquire more or less of a vertical position, at the same time that they are conveniently supported by a footboard, in so much that by these two contrivances jointly the patient or person supported may at pleasure
20 assume the position and situation of one recumbent in bed or sitting up in a chair. And these respective motions of raising and lowering the said last-described pieces of framing can be readily produced by the said person himself, or any assistant, by means of a simple pulley and cord to each end with or without a tackle, and forming communication between the said moveable
25 frames and the superior part of the said bed at or near its place of suspension by the spring. The bedding may be disposed either above or below the ticking, and in the latter case the same may be applied and kept in its place by a proper application of straps, by which means the said bedding may be removed and shaken up, and again replaced, without disturbing the patient in
30 the least; and, moreover, by cutting an hole in the ticking, an aperture may be made of the most convenient use for the natural evacuations, or for other purposes of salubrity and curative processes. For the construction of cradles or small beds for children, an appropriate frame may be made, to the upper part of which the spring is to be attached, and the sides thereof may, by
35 sliders or stops, or otherwise, so govern and confine the motion as to restrain it altogether to the vertical oscillation, or leave the pendulous motion more or less at liberty, as may be required. I likewise use the aforesaid mechanical apparatus, with its spring or springs, to suspend sofas, chairs, and other sorts of seats, with or without moveable backs, for the repose of the human body.

Thoelden's Apparatus for Supporting the Human Body.

The new suspension herein-before described is applicable and attended with the most happy effects in the support and suspension of broken or diseased limbs or parts of the human body. My apparatus for this purpose is particularly described as follows:—

First, I make my suspension by means of one or more springs, either from 5 the cieling or upper part of the apartment, or from the usual frame or tester of a common bedstead, or from a frame expressly made and constructed for this purpose, and I apply the cord or rod to prevent accidents, as herein-before described, by which means the limb is suffered to acquire, when necessary, a gentle and easy motion up and down, and also in every required horizontal 10 direction.

Secondly, I fix a pulley to the lower moveable part of the spring, and the sheave or wheel of the said pulley is confined in its cell or block, so that it becomes what in sea language is called a dead eye, or I simply use a ring or loop instead of the said pulley. I pass a cord through the last-mentioned 15 pulley, ring, or loop, the extremities of which cord are applied to support the two ends of a board, which constitutes part of the bed or receptacle for the limb. The said cord is not fastened immediately to the board, but to two loops of cord which pass respectively thro' two holes at each end of the said board, and the said first-mentioned cord is fastened permanently to 20 one of the said loops; but at the other extremity it is provided with a number of eyes or openings into which an hook from the other loop can be inserted at pleasure, and lengthen or shorten the whole effective part of the said first-mentioned cord. By this method of suspension the board may be raised or lowered, and placed in any position with regard to its 25 length, by drawing down one or other of the extremities of the cord which passes thro' the dead eye or ring, and it may be also placed in any position with regard to its breadth by means of the loops at the end, which can be slid in the holes of the board.

Thirdly, I suspend beneath the said board longitudinally a flexible receptacle 30 for the leg or limb, made of cloth, leather, or any other fit material, with a piece or stump of the same, to form a rest for the sole of the foot, attached by a string to one of the pegs herein-after described. To the edges of the said receptacle, which may be stiffened by a thin slip of wood, walebone, or any fit material, if thought convenient, I tie or loop certain strings to hooks, 35 which are engaged in the eyes or holes in the edges of the said flexible receptacle, and the said strings pass upwards over the edges of the said board, and thence are wound respectively through and round certain pegs resembling those of musical instruments, which said pegs may be disposed in a line along

Thoelden's Apparatus for Supporting the Human Body.

the middle of the said board, each peg being used to raise and lower at the same time the string attached as aforesaid to the opposite points of the said receptacle. By the aforesaid strings the said cloth can be applied more or less firmly against the different parts of the said limb, so as to support the same
 5 in the most easy and comfortable manner; and in case it should be necessary to uncover a part of the said limb while the rest of the limb remains suspended, the cloth or receptacle may be made to consist of a number of separate pieces, each supported by strings as before described, which may be slackened or disengaged while all the others continue to perform their office;
 10 or in case of any discharge of humour from the said limb, any part thereof may by this means be left uncovered, and dressings may be changed or removed, and fit vessels or other proper applications may be duly placed or suspended, according as the nature of the indisposition or other circumstances may demand. And for the purposes of warmth, clothing, or defence against the
 15 external air, it is easy to apply the usual framing over the board, to keep off the bed cloaths along with this machine, in the same manner as is now practised in ordinary cases, or otherwise small openings may be made in the clothing, to admit the strings or cords, so that the board shall be either above or beneath the clothes and the receptacle and limb in all cases; besides which,
 20 many easy and obvious arrangements in the dimensions, as well as in use of the apparatus, will be perceived by the intelligent operator, and need not here be described.

In witness whereof, I, the said Augustus Frederick Thoelden, have hereunto set my hand and seal, this Tenth of November, in the year of our Lord One thousand eight hundred and two.

25

AUGUSTUS FREDERICK THOELDEN. (L.S.)

AND BE IT REMEMBERED, that on the same Tenth day of November, in the year above mentioned, the aforesaid Augustus Frederick Thoelden came before our Lord the King in His Chancery, and acknowledged the
 30 Specification aforesaid, and all and every thing therein contained, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute in that case made and provided.

Inrolled the Fifteenth day of November, in the year above written.

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